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ABSTRACT

Literature on program budgeting is synthesized. Program budgeting has progressed considerably in development and use, but only recently has it been used by the public schools. Program budgeting is practiced differently, depending on the mission of an organization or school district. With regard to schools, literature on the subject is mainly limited to the actual working budget and its reporting documents, which provide the most current information. However, writings by program budgeting authorities in other fields have general application for schools. In industry, program budgeting essentially is comprehensive long-range planning, which is related to departmental plans. Cost-benefit analysis is used to analyze the investment returns on expenditure choices. When applied to traditional budgeting in the schools, program budgeting focuses on end-product activities based on expenditure choices. This method involves long-range planning rather than the examination of minute object-of-expenditure details. A 126-entry bibliography is appended. (Author/DE)

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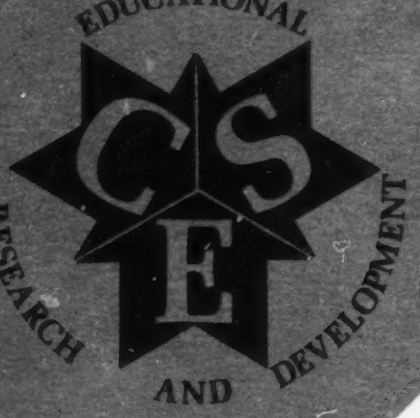

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CSE Report No. 7
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INTRODUCTION

The evaluation of cost-effectiveness of instructional programs would be greatly enhanced by an accounting system which would enable the identification of financial resources allocated to individual programs. Traditionally, accounting systems are function- and object-oriented and generally do not provide data by program classification. Here at the Center, we are attempting to develop a program budgeting system for public schools. This paper is an attempt in that direction.

This report is a synthesis of recorded knowledge on program budgeting and includes comprehensive information on current program budgeting practice, as well as a review of the history and relevant literature in the field. The major problem in considering such a system appears to be that there is little agreement as to what a program is and what constitutes its limits and function. The purpose of this study is to aid those not familiar with the approach to review the various concepts of the method and to provide those interested in future research and investigation with a guide to available data.

DEFINITION

The name "program budget" is derived from the simple fact that the planning process is organized by program rather than by department of fiscal input or output.[1] At present, no standard definition of program budgeting exists. Program budgeting is generally described as a planning-oriented procedure. Its chief goal, according to Schick, is to rationalize policy-making by providing (a) data on the costs and benefits of alternative ways of attaining proposed public objectives and (b) output measurements to facilitate the effective attainment of chosen objectives.[2]

THE HISTORY AND BACKGROUND OF PROGRAM BUDGETING

Program budgeting has passed through several distinct evolutionary periods. The first was the developmental period, which was borne out of the need for a national budget. As difficult as it may be to believe, the budget practices of federal institutions prior to the Budget and Accounting Act of 1921 were such that it was virtually impossible for any appropriating body or the public to know where its money

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[1]Frank B. Dilley, "Program Budgeting in the University Setting," The Educational Record, 47 #4, (Fall, 1966), 478.

[2]Allen Schick, "The Road to PPB: The Stages of Budget Reform," Public Administration Review, December, 1966, 251.

was going.[1] The budgeting practice of lumping expenditures had been consistent with the planned purpose of the appropriation. Budgeting procedures basically consisted of revising estimates.

The most significant change in budgeting, which paved the way for program budgeting, occurred in 1907 under the leadership of Frederick A. Cleveland, when New York City's Bureau of Municipal Research adopted this method.[2] Shortly thereafter, other cities followed New York's leadership in budget reform; and in 1910, Chicago reconstructed its budget and separated its appropriations according to specific categories.[3] In the same year Dr. Cleveland was appointed chairman of the newly created President's Commission on Economy and Efficiency. The commission made significant recommendations for budget improvements in their report, The Need for a National Budget, which led to current reform and the original concept of program budgeting. The recommendations which classified expenditures in terms of programs were supported by President William H. Taft, who in 1912 asked the Senate and the House of

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[1]H. Thomas James, James A. Kelly, & Walter I. Garms, Determinants of Educational Expenditures (Stanford, Cal.: Stanford University School of Education, 1966), p. 48.

[2]William F. Willoughby, Principles of Public Administration (Baltimore, Md.: Institute for Government Research, 1927), p. 438.

[3]James, Kelly, & Garms, p. 47.

Representatives to consider a new method of budgeting whereby Congress could act on:

> a definite business and financial program; to have the expenditures, appropriations, and estimates so classified and summarized that their broad significance may be readily understood; to provide each member of Congress, as well as each citizen who is interested, with such data pertaining to each subject of interest that it may be considered in relation to each question of policy which should be gone into before an appropriation for expenditures is made; to have these general summaries supported by such detail information as is necessary to consider the economy and efficiency with which business has been transacted; in short, to suggest a plan whereby the President and the Congress may cooperate--the one in laying before the Congress and the country a clearly expressed administrative program to be acted on; the other in laying before the President a definite enactment to be acted on by him.[1]

Also in 1912, Frank Bachman, a member of the New York City Committee on School Inquiry, recommended in a study that if schools are to become efficient financially, they must establish standards of costs. When similar data are collected on each kind of school and derived from tests to determine standards of costs,

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[1]U. S. President's Commission on economy and Efficiency, The Need for a National Budget (Washington, D. C.: Government Printing Office, 1912) pp. 4-5.

it will be possible to locate and eliminate financial waste.[1]

Budgetary reform was slow in coming. In 1913 six states enacted budgetary legislation, although California and Wisconsin had enacted laws with provision for budgetary procedure two years before.[2]

The old method of budgeting in government continued juggling the responsibility for budget preparation and negotiation between the different department heads and the appropriate Congressional committee. The President had little or no control, with the exception of one provision in the law (35 Stat., 1027, sec. 7) which allowed him to advise Congress in toto on estimated revenues and expenditures in his State of the Union Address.[3] Little else was accomplished until after World War I, when the idea began to attract supporters.[4]

Public opinion was sharply divided as to whether the President should be given authority for the preparation of the budget. However, there was a drive for

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[1]Frank P. Bachman, "Attaining Efficiency in City School Systems," The Annals, American Academy of Political and Social Science, 41 (May, 1912), 175.

[2]Don P. Bushnell & Dwight W. Allen, The Computer in American Education (New York: John Wiley & Sons, 1967), pp. 14-15.

[3]U. S. President's Commission, The Need for ..., pp. 19-20.

[4]Howard Merry, "Evolution of the Budget," Wall Street Journal, January 21, 1964, 12.

economy after World War I;[1] support for reform became so widespread that Congress passed the Budget and Accounting Bill of 1919 and later passed the Accounting Act of 1921, which was approved by President Harding.[2]

The second period was a period of control. This period began with the Accounting Act of 1921, creating the Bureau of the Budget and giving the President the responsibility of preparing a comprehensive budget of revenues and expenditures. The purpose of this budget was to provide a means of translating "work programs" into fiscal terms so that each activity could be balanced with other activities and revenues in long-range economic policies, which would take into account past activities and a future program for advanced approval.[3]

In the early 1920's the DuPont Corporation was using a form of program budgeting. Donaldson Brown, now retired Chief Finance Officer for General Motors Corporation, brought a form of program budgeting from DuPont in 1924 and applied it as a major innovation at

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[1]David Novick (Ed.), Program Budgeting, Program Analysis, and the Federal Budget (Cambridge: Harvard University Press, 1965), p. 30.

[2]Merry, 12.

[3]U. S. President's Commission on Administrative Management, Administrative Management in the Government of the United States (Washington, D. C.: U. S. Government Printing Office, 1937), p. 16.

General Motors.[1] Program budgeting was advanced in 1930 by William A. Jump, budget officer for the U. S. Department of Agriculture[2] and was expanded upon by the War Production Board in 1941 through the efforts of Ferdinand Eberstadt.[3]

In the late 1940's the federal government developed program budgeting in the Bureau of Reclamation, the Coast Guard, and other agencies.[4] Program budgeting was then dormant until the end of World War II when the Hoover Commission in 1949 recommended a new form of "performance" budgeting for all departments.[5] In the same year, the RAND Corporation completed the first of a number of systems analysis studies and in 1953 published the first program budget to be applied to the Air Force.[6] In 1955 the second Hoover Commission recommended "that the executive budget continue

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[1]David Novick, Origin and History of Program Budgeting (Santa Monica: RAND Corp., October, 1966), p. 2.

[2]Eugene R. Elkins, Program Budget. A Method for Improving Fiscal Management (Morgantown, W. V.: Bureau of Government Research, West Virginia University, Publication #14, 1955), p. 2.

[3]David Novick, Which Program Do We Mean in Program Budgeting? (Santa Monica: RAND Corp., May 12, 1954), p. 5.

[4]David Novick, Origin and History ..., p. 6.

[5]Herbert Hoover (Chairman), Hoover Commission Report, Vol. VIII: Treasury Department--A Report to the Congress (March, 1949), p. 3.

[6]Novick, Origin and History ..., p. 6.

to be based on functions, activities, and projects but be redesignated as a 'program budget'."[1]

Contemporary Period

In 1961, Secretary of Defense Robert S. McNamara and his Comptroller, Charles J. Hitch, introduced program budgeting to the Department of Defense.[2] This was the first time program budgeting had been attempted for an entire agency. A 1964 United Nations report of United States budget practices estimated that more than 80 percent of all United States agencies gave cost information in their appropriation requests, providing an effective means for both fund and program control.[3] President Johnson in 1965 ordered the introduction of program budgeting to the executive branch[4] and later directed all department heads and establishments to have their planning-programming-budgeting (PPB) financial plans prepared for the Bureau of the Budget by May 1, 1966.[5]

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[1]Herbert Hoover, Budget and Accounting in the United States Government (United States Commission on Government, June, 1955), p. 29.

[2]Daniel Seligman, "McNamara's Management Revolution," Fortune, July, 1965, 117.

[3]United Nations, A Manual for Programme and Performance Budgeting (New York, 1965), p. 2.

[4]U. S., Executive Office of the President, Planning-Programming-Budgeting (Washington, D. C.: Supplement to Bulletin No. 66-3, February 21, 1966), p. 1.

[5]U. S., Bureau of the Budget, Planning-Programming-Budgeting (Washington, D. C.: Bulletin No. 66-3), October 12, 1965, p. 1.

The Fiscal and Financial Branch of the United Nations reports that functional classifications have been widely adopted. This is particularly true of most Central and South American countries and many countries in Africa.[1] The Municipal Finance Officers Association conducted a study in 1966 to update the inventory of present-day budgeting practices in the United States and Canada. Of the 548 jurisdictions that reapplied, a total of 129 utilized some method of performance or program budgeting.[2]

Looking back over the history of government and business budgeting, it is remarkable how young is the practice of effective and widespread budgetary control.[3] Program budgeting has only recently come to the public schools. This slow pace tends to conceal the long way that program budgeting has come.[4] Since its introduction, it has made considerable headway through many diversified approaches.

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[1]United Nations, Manual for Program Budgeting, p. 6.

[2]George A. Terhune, Performance and Program Budgeting Practices in the United States and Canada (Municipal Finance Officers Association, Report No. 2), August 25, 1966, p. 8.

[3]George A. Steiner, "Program Budgeting Business Contribution to Government Management," Graduate School of Business, Indiana University, Spring, 1965, p. 44.

[4]Merry, 21.

LITERATURE IN THE FIELD

Literature in this field has followed the historic process in articles, books, and manuals. Valuable writings on this subject cover several categories: municipalities, the states, the federal government, the Department of Defense, universities, general application, and more recently, economists and public school finance.

The bibliographical sources partially reviewed in the ensuing discussion are extremely valuable in gaining specific as well as general knowledge.

Municipalities

As a result of strong public interest, bureaus of municipal research were organized to develop, study, and improve financial procedures. One of the oldest, which has had a great influence in New York and the country generally, is the 1907 New York Bureau of Municipal Research report, Making a Municipal Budget.[1] This report was the forerunner to the Taft Report. Many contributions to municipal budgeting and accounting from individual municipalities such as the Citizens' Budget Commission of New York and the Municipal Finance Officers' Association, have been valuable to those studying program budgeting for schools. For broad coverage, a valuable source is the Municipal Finance Officers' Association Bibliography on Performance Budgeting, Accounting Publication Series No. 11-5.

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[1]Willoughby, p. 438.

Suggested reading for greater background and understanding includes John M. Leavens' study of the 1957 Citizens' Budget Commission to determine the progress made throughout the country in the development of standards of performance; Lawrence L. O'Toole's brief report, Program and Performance Budgeting in Municipalities, covering the status of thinking on this subject through 1963; and George A. Terhune's study (which revised O'Toole's study) in his 1966 publication, Performance and Program Practices in the United States and Canada.

The States

The states followed the leadership of the municipalities. California, one of the first to innovate, now has three budgets in program form and many other departmental budgets that have elements of the program approach. The publication State of California Sample Program Budgets reviews 18 new samples. Other excellent examples of the program approach in state governments are A Report on the Program Approach to Budgeting, 1960, in the State of Hawaii; Walter T. Greaney's A Program Budget for Massachusetts, 1963; and the Wisconsin Biennial Budget for 1967-69.

The Federal Government

President William H. Taft's commission report on economy and efficiency produced The Need for a National Budget. This report laid the groundwork for the comprehensive Budget and Accounting Act of 1921 and, later, the influential Hoover Commission Reports of 1949 and 1955. Since then, a number of studies have contributed

to program budgeting on the federal level. Gene H. Fisher's study, The World of Program Budgeting, defines the major considerations involved in program budgeting. Roland N. McKean and Melvin Anshen's study, The Problems, Limitations, and Risks of the Program Budget, focuses on specific national program goals and decision-making on these issues. Arthur Smithies elaborates on the decision-making process in his study, Government Decision-making and the Theory of Choice, presenting formulas to aid those who must choose between alternatives. Werner Z. Hirsch's study, Integrating View of Federal Program Budgeting, gives an overall format for use in planning appropriation, administration, and control.

Arthur Smithies also wrote The Budgetary Process in the United States. In this important study he thoroughly discusses the program or performance budget and recommends that programming be separated from economy and efficiency. He further recommends development of the program budget procedure to prevent unrelated expenditure decisions.

The recent executive order from the office of the President, Bulletin No. 66-3, contains instructions for the establishment of program budgets in all federal departments and establishments, climaxing the impact of program budgeting in the federal government.

The Department of Defense

In almost any study on program budgeting, the work carried on in the Department of Defense is mentioned.

Daniel Seligman's article, McNamara's Management Revolution, provides an overall view of what has taken place. The two most often quoted books dealing with the Department of Defense are Frederick C. Mosher's Program Budgeting: Theory and Practice, 1954, which gives particular reference to the Department of the Army, and Program Budgeting, Program Analysis and the Federal Budget, edited by David Novick. The latter is comprised of outstanding interrelated essays divided into three sections: the first deals with government decision-making and the program budget; the second reviews actual and potential examples of the applications of the concept; the third considers the problems and limitations of program implementation and operation. Another highly quoted book, Decision Making for Defense, was written by Charles J. Hitch, Assistant Secretary of Defense under McNamara. He provides a historical perspective on the task of decision-making for national security and explains the problems of fitting together strategic alternatives and economic resources to achieve a rational pattern of defense management. David Novick enlarges on Hitch's book in his study, Program Budgeting: Long-Range Planning in the Department of Defense, describing the new planning and programming process initiated in the Department of Defense in early 1961.

Universities

The universities were involved in program budgeting research earlier than public schools in general. In 1954, Eugene R. Elkins wrote an excellent publication for West Virginia University, Program Budgeting:

A Method for Improving Fiscal Management. Roland N. McKean's Centralization and Higher Education is a recent study reviewing the possible costs and economics of centralization and the positive and negative outcomes resulting in centralization. In 1966, two publications were written which stress the applicability of the concept to colleges and universities: Frank R. Dilley's Program Budgeting in the University Setting and Harry Williams' Planning for Effective Resource Allocation in Universities. The studies describe the unique problems found in a university and give examples of an approach and broad general information useful to those interested in applying program budgeting in other fields.

General

Noteworthy in the general area of program budgeting are articles by Gladys M. Kammerer, Program Budgeting: An Aid to Understanding, and George A. Steiner, Program Budgeting: Business Contribution to Government Management. Outstanding in the field of program budgeting is Arthur Smithies' A Conceptual Framework for the Program Budget. Smithies outlines the role of budgeting, discusses past improvements in the budgeting process, examines the techniques of program budgeting, and considers the possible problems of organization and administration in connection with the implementation of program budgeting. Other worthwhile general studies are David Novick's Which Program Do We Mean in "Program Budgeting"?; the United Nations publication, A Manual for Program and Performance Budgeting;

and James, Kelly, and Garms' Determinants of Educational Expenditures in Large Cities of the United States, which provides a background on program budgeting in large cities.

Economists

Economists are becoming increasingly interested in education. In the past they concentrated on the economic significance of education, the relationship of economic growth to education, and education and income for individuals. For a broad review, Professor Charles S. Benson's book, Perspectives on the Economics of Education, offers a compilation of 52 readings on the economics of education by authorities in the field.

Recently, economists have been concentrating on the cost-benefit aspects of education. Harold Clark's Cost and Quality in Public Education is a typical example. The 1963 report is written primarily for the general public in an effort to introduce the broad issues concerning the relationship of cost and quality of education. The study reviews the experiments that have been made in the area since 1890. Jerry Miner in his article, Financial Support of Education, reviews the advantages and limitations of program budgeting. Kershaw and McKean in their book, Teacher Shortages and Salary Schedules, review economics as related to multiple teacher salary schedules and teacher morale. Werner B. Hirsch has written a number of papers related to the subject: Education in the Program Budget, State and Local Program Budgets, Regional Accounts for Public Schools, and Spillover of Public Education Costs and

Benefits. Hirsch points out that economic theory of choice over time or capital theory and cost-benefit analysis, sometimes referred to as cost-effectiveness, has been explored fully. Examples are Roland N. McKean, "Cost-Benefit Analysis and British Defense Expenditure," Scottish Journal of Political Economy, Vol. X, pp. 17-35; Charles J. Hitch and Roland N. McKean, The Economics of Defense in the Nuclear Age (Cambridge: Harvard University Press, 1960) pp. 109-118 and pp. 182-187; Arthur Smithies, Government Decision-making and the Theory of Choice (Santa Monica: The Rand Corporation, 1954), pp. 26-90; Roland McKean, Efficiency in Government Through Systems Analysis (New York: John Wiley & Sons, Inc., 1958); and J. Hirschleifer, J. C. DeKaven, and J. W. Milliman, Water Supply (Chicago: University of Chicago Press, 1960).

Public Schools

A review of the following well-known recent books and articles on educational finance reveals inferences of program or performance budgeting; however, they contain few and limited direct references. The 1933 National Survey of the School Finance Committee outlines the key budget and accounting problems of the time that need research. The committee found a considerable amount of theoretical and philosophical literature on school budget-making but not much research literature on the topic. The earliest doctoral dissertation found was by J. W. Twente in 1923, Budgeting Procedure for a Local School System. In this study of 363 city school districts, Twente found that the budgeting processes

in public schools were relatively undeveloped--basically because the lack of standardization and procedures made it difficult to arrive at a consensus about how a budget should function.

Between 1933 and 1952, limited reference to program budgeting is made in the many books and articles published on school finance and budgeting.

Simpson and Lake, in their 1952 study, a part of the National Education Association Finance Committee's study, Research Problems in School Finance, state that meager contributions have been made in the improvement of budget procedures and the document. They do not refer to program budgeting as such but list the number one need as improvement of the technique of relating services or activities to cost figures.

Program budgeting can be inferred from DeYoung's concepts of budgeting. DeYoung covers the evolution of the school budget in his 1955 book, Introduction to American Education, from (a) strictly expenditures, (b) expenditures with off-setting receipts, and (c) his modern three-dimensional version of expenditures and receipts based on the proposed educational program which he developed in 1924.[1] The following year, 1956, he recognized the merits of "performance budgeting;" and as one of the authors in Henry H. Linn's School Business Management, he devotes two pages to

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[1]Chris A. DeYoung, Budgeting in Public Schools (Garden City, New York: Doubleday Doran & Co.), p. 124.

performance budgeting. DeYoung describes the terms and gives an example of a performance budget, published earlier by Harold E. Ackerly in the National Schools (February, 1951). The United States Office of Education in 1957 published Financed Accounting for Local and State School Systems. This book, commonly referred to as "Handbook II," mentions program budgeting and suggests two ways to account for expenditures by programs: (a) direct and (b) through an undistributed account.

In 1959, J. A. Kershaw and R. N. McKean wrote Systems Analysis and Education. After studying the educational process, the measurement problems, and available data, they conclude that comparisons will be feasible in the near future.

Munse and McLoone's often quoted, detailed 1960 study[1] gives a comprehensive view of school budget practices in the United States; however, no mention is made of program or performance budgeting activities. In the same year Orsview and Castetter wrote Budgeting for Better Schools. They treat performance budgeting lightly, although they accept the principle of the concept. They state that sound budgeting always has stressed the relationship between school purposes and the budget items and the need for improved reporting and appraisal. They believe that the performance budget applicable for municipalities is not applicable in

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[1]Albert R. Munse, & Eugene P. McLoone, Public School Finance Programs (Washington, D. C.: U. S. Government Printing Office, 1960).

education. In short, "the standards which are effective in budgeting for snow and garbage disposal are not equally applicable in budgeting for the education of children."

Roe, in his 1961 book, School Business Management, devotes an entire chapter to budgeting. His section on budgeting philosophies describes the functional approach, similar to DeYoung's concepts and characteristics of program budgeting today. Under the functional approach, the budget committee considers the educational plan before it considers money, translates the quantitative and qualitative aspects of the program into costs, and attempts to show the people's needs so that they will provide the money. Public Administration, written in 1962 by Simon and others, approaches administration through analysis of human behavior, emphasizing the organizational units. Several pages are devoted to the "program emphasis" for varied agencies, stating that program emphasis can be controlled through the allocation of budget funds and that program organization should be developed where it will receive the most favorable treatment, i.e., natural units of organization.[1] In the comprehensive 1965 National Education Association Finance Committee's publication, Trends in Financing Education, three papers by Jesse Burkhead, Donald W. Hill, and E. E. Stimbert are presented which concentrate on program budgeting viewed

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[1]Herbert Simon, Donald W. Smithberg, & Victor A. Thompson, Public Administration (New York: Alfred A. Knopf, 1962), pp. 168-72, 179.

in its contemporary form. In the 1967 reprint of Educational Organization and Administration: Concepts, Practices, and Issues by Morphet, Johns, and Reller, the authors refer to the "PERT" management technique for nonrepetitive operations, present a broad and detailed discussion on budgeting, and outline the advantages of accrual accounting. They devote a paragraph to explaining performance budgeting and how it supplements traditional budgeting practices. Performance budgeting is recommended as probably the best type of budget form.

The most recent material on program budgeting in the public schools comes from the actual working documents used to describe and implement program budgeting in the various school systems. The next section on current program budgeting practices can be considered a continuation of this section on the literature, since it describes what is actually occurring in the field.

CURRENT ATTEMPTS AT PROGRAM BUDGETING IN THE PUBLIC SCHOOLS

The following are examples of current approaches to program budgeting that are being used by various school districts and state agencies to inform taxpayers and their representatives of the nature and extent of services being rendered, and to point out the feasible alternatives and true costs which may be involved in making basic decisions.

The first six examples bring into focus the diversified current approaches to program budgeting in use today. The remaining examples in capsule form give a fuller national overview of current program budgeting activities in progress.

Municipalities

Philadelphia, Pennsylvania

The Philadelphia School System changed from a calendar to a fiscal year budget in 1966-1967, and at the same time departed from the traditional concept of departmental budgeting to program budgeting. The program budget is broken down into 12 functional categories:

1. Early Childhood Education provides a planned, well-balanced school experience for children up to and including kindergarten.

2. Elementary Education is concerned with the development of skills, facts, habits, and attitudes for children in grades one through six.

3. Junior High School Education provides experiences designed for the early adolescent period, usually enrolling pupils in grades seven through nine.

4. Senior and Technical High School Education is more expensive and specialized than any of the other divisions. It has a typical span of grades 10 through 12.

5. Special Education is planned for pupils who differ physically, mentally, emotionally, or socially.

6. Community Education and Services covers adult education and includes such programs as unemployment, retraining, manpower retraining, school extension activities, and standard evening classes. Summer playground expenses also are allocated to this program.

7. Social Health Services provides physicians, dentists, nurses, and related personnel to care for the health of students in public and non-public schools.

8. Transportation and Attendance includes transporting children to and from school, events sponsored by the school, and the cost of enforcing compulsory attendance laws and pupil accounting.

9. Plant Operations and Maintenance pertains to keeping the facilities in or near their original state of repair. The maintenance activity includes upkeep of grounds; repair and replacement of heating, lighting, plumbing, and electrical equipment; and repair and replacement of instructional apparatus, furniture, and equipment. The operational activity includes expenditures to keep the school facilities open and ready for use--a housekeeping function which provides for wages of custodians and other operational employees and for costs of fuel, water, lights, power, and custodial supplies.

10. Administration, Planning, and Staff Development includes expenditures related to the guidance of people toward achieving school objectives, as well as the fundamental administrative processes of planning, activating, and evaluating. Also included are the technical practices relating to budgeting and accounting, personnel, curriculum development, staff development, administration of service operations, research

and informational external relations, and internal services. Expenses of the Board of Education, the Superintendent, and his central staff are subsumed in this category.

11. Fringe Benefits includes payment to the state retirement fund; federal social security; and life, health, and medical-surgical insurance.

12. Debt Service concerns the payment of principal and interest charges on short-term, working capital loans and on the long-term debt incurred to finance the capital program of the school district. The functions, grouped into three columns for presentation purposes, are basically a summarization of detailed budget expenditures. The functions listed in the expenditure columns--(a) Present, Program Current Year, (b) New and Expanded Programs Current Year, and (c) Federal and Anti-Poverty Programs Current Year[1]--are reviewed in detail in the body of the budget document after the purpose of the function is stated.

Activities not classified by purpose are covered under Contingencies. Each function of the total program is divided into traditional budgeting by object classes. The object classes--including 100 personnel services, 200 contracted services, 300 materials and supplies, 800 debt services--are applied where appropriate.[2]

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[1]Richardson Dilworth, Proposed Operating Budget of Philadelphia School District (Pennsylvania Board of Education, July 1, 1966).

[2]Ibid., p. 43.

Income is classified into two sets of revenue services: (a) General and (b) Federal Education and Anti-Poverty Receipts.

The approach is objective or output oriented, emphasizing what the district intends to get out of its expenditures. No attempt is made to pro-rate the varied costs into the actual cost of a major educational function. As a result, per-pupil costs are not given.

The program in its first year of operation does not include comparisons of the purposes or objectives as they relate to the prior year plan, which would indicate whether the desired goal had been accomplished

Dade County, Florida

The Dade County School System presently is budgeting under a dual system: (a) the state of Florida required traditional object classification system, and (b) a pilot three-dimensional program budget system.

The pilot study currently is being researched under a $257,592 federal grant. Instructional as well as non-instructional programs are being developed and reviewed in an attempt to define and refine the system's diversified educational goals. Instructional programs are receiving priority. Cost-analysis will be introduced after the goals are established.

The 3-D approach, designed for a large public school system, will be implemented through central data processing. The technique is aimed at providing more accurate cost-effectiveness and analysis, giving more information to educators and allowing them to base decisions on alternative instructional programs and on all categories of support for these programs. Dimension 1 of the program, State Code Accounts, accommodates the state law which prescribes accounting codes, accounting practices, and auditing procedure. Dimension 2, Responsible Cost Centers, specifies that all cost center supervisors, who are responsible for good management, are also responsible for preparing, evaluating, and operating programs for the coming year. The plan is "priced out", specifying what it will cost to accomplish the program. Each cost center budget is evaluated, in turn, by higher echelons of management within the school system, who eventually determine what activities will receive emphasis during the coming year. Under Dimension 3, Programs, instructional programs will be arranged in order of priority in the program dimension, leaving the non-instructional programs that the superintendent and board wish to review on a selective basis. Non-instructional activities not selected for cost analysis during a fiscal year would appear in the state code dimension only.[1]

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[1]Jack W. Whitsett, The Dade County Approach to Program Budget Design (Miami: Dade County Board of Public Instruction, February 27, 1967), p. 6.

The system, which basically will operate through a revised budget manual, will be implemented by a staff trained through the cooperation of the University of Miami.

Memphis, Tennesee

The Memphis school system has today over 106,000 children in its public schools and ranks and the fifteenth largest system in the nation.[1]

To facilitate program budgeting, two computer systems are used to process all the data. Information is punched on cards, processed through a tape system, and stored on discs and magnetic tapes. Memphis, which is probably further along than any system in the United States, used nine programs or applications in its basically non-instructional programs:

1. Personnel provides the necessary information and written authorization to place new employees on the payroll and to make any changes in existing information.

2. Payroll has two types of payroll prepared: (a) the monthly teacher payroll, prepared on an exception reporting basis, and (b) the daily and hourly payroll for custodial, cafeteria, and maintenance employees, prepared semi-monthly for some employees and weekly for others.

3. Accounts Payable has a procedure which includes the distribution of expenses according to function and

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[1]International Business Machines, General Information Manual, Data Processing at the Memphis Schools (White Plains, N. Y.: IBM Technical Publications, 1963), p. 1.

object, as well as checks, remittances, and necessary registers, and provides the entries for the budgetary records during the processing.

4. Inventory maintains a perpetual inventory of supply items which are recorded in disc storage, one disc sector containing one item of inventory. Disc storage allows immediate updating for all issues and receipts on those items which are active. (Textbook and equipment inventories are maintained on cards and are processed by standard-unit record equipment.)

5. Budgetary Accounting is a summary procedure of the previous application. The use of disc storage allows budget accounts to be updated along with the normal practice of the payroll, accounts payable, and inventory--thus providing a current picture for administration.

6. Student Registration and Scheduling is a procedure dealing with all phases of student registration, including master schedules, class roles, and other materials. The program allows students to select courses in their major and minor sequences as well as in the elective field. It enables principals and faculty to assign pupils to specific levels of instruction as established by the Board of Education.

7. Attendance: The Memphis school system has centralized the computing and preparation of the required attendance reports. The individual teacher is required only to report a student's attendance and absence.

8. Grade Reporting procedure involves grade reporting, preparation of report cards, and updating of the grade report tape.

9. Student Testing is a procedure involving the scoring of all tests, the ranking of students, and the establishment of necessary means, medians, etc., for the complete system. An attempted program in the area of permanent records is now in the pilot-project stage.[1] Cost information, by function, such as instruction or detail (e.g., salaries of all tenth- through twelfth-grade biology teachers), is handled through a ten-digit coding system.

Memphis probably will be able to refine its present system and function with the computer hardware now in use, since its future growth will not be conducive to more sophisticated equipment. The Memphis system is limited and not practical for huge districts, since it is a card system and a large system can handle only a reasonable amount of cards.

San Diego Unified School District

San Diego school officials, faced with a tax override failure in 1963, queried the public for the reasons causing the defeat. Responses indicated that school finance information typically distributed was meaningless.

The school system turned to program budgeting to provide meaningful financial data related to specific instructional and support service programs to enlighten the public and gain support.

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[1] Ibid., p. 26.

The San Diego approach is a dual budgeting approach. The first approach is traditional and is used to meet state accounting and reporting requirements. Its program budgeting approach, still in the developmental state, is unlike the Dade County, Florida plan (which incorporates the state code of accounts) in that it is made up of nine separate major program coding classifications. The new, simpler system of expenditures reflects the system's functions and levels, reducing the number of control accounts from 3,160 to 600. The 100-300 series appears as on-site costs. The 400-900 series reflects indirect costs which are pro-rated to the various educational levels. A pro-rated schedule is also used for administrative and board purposes. The schedule shows, by percentage, the amount of function funds that are credited to the various educational levels. District, as well as administrative emphasis, is evident through careful analysis of schedule.

The district currently is evaluating various combinations of expenditures which will relate the tax dollar to end results in terms of:

1. Basic Educational Programs
2. Programs for the Gifted
3. Programs for the Handicapped
4. Direct Services to Pupils
5. Direct Services to Teachers
6. Instructional Supervision and Leadership
7. Planning, Maintenance, and Operation of School Buildings
8. Personnel Services
9. School District Operation and Administration

Administrators also are considering combining these programs and the 100-900 account system into three types of educational programs: basic, gifted, and handicapped. The three programs would be reviewed in a five-column exhibit, emphasizing net local cost, with the following headings:

On-site Cost	Indirect Cost	Total Cost	Less Operating Income	Net Cost

The program budget is viewed by the San Diego District as a presentation budget, separate from the regular budget but included as an exhibit in the regular budget. The 100-plus page presentation uses laymen's terms and emphasizes expenditures broken out by educational levels; e.g., all expenditures related to elementary schools are shown separately from those related to secondary schools and junior colleges.[1] Expenditures and income are listed in a traditional manner at the end of the document, covering three years for comparison purposes. For each program, an explanatory text is prepared which reviews the purposes, accomplishments, program improvements, and new additions to the programs. Cost estimates are supported by comparable data from other California school districts and the San Diego City Schools' experience of prior years.

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[1]San Diego City Schools, Citizens Annual Budget 1965-1966 (San Diego: San Diego Unified School District, March, 1966), p. 1.

The approach is not designed to go into further subclassification costs, such as individual school or subject matter costs. The information is obtainable, however, through the present accounting system.

At this point in their program budgeting experience the San Diego officials have reached the following conclusions:

1. The primary value of budgeting for specific programs appears to be its ability to explain complex financial transactions in simple terms. It has less value as a device for administrative control.

2. To be meaningful, such budgeting must provide an accurate basis for apportioning the cost of administration, employee fringe benefits, insurance, and other general overhead to program objectives.

3. As long as the State requires such expenditures to be grouped functionally (except for the fixed charges category, which is little more than a collection of odds and ends) while administrative convenience requires that they be grouped organizationally, the merging of the two requirements with the program concept tends to create an unworkable number of account classifications.[1]

Sacramento City Unified School District

The Sacramento Unified School District Program Budget is presented in comprehensive form to the board

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[1]San Diego School District, Program Budget Report, UCLA-Program Budget Conference (Los Angeles, February 27, 1967), p. 1.

and community early in June. The district's format is typical in its reporting of estimated income and expenditures. The concept, although comprehensive, is limited in detail and emphasizes proposed as well as current program accomplishments through succinct explanations.

The budget is organized into three major programs: (a) Administrative Services, (b) Instructional Programs and Services, and (c) Supporting Services. Other expenditures and disbursements which are unrelated to the ongoing instructional programs are classified traditionally under the State of California account code classifications. Administrative services cover appropriations for the Board of Education, the office of the Superintendent, Personnel Services, Planning and Research Services, and Business Services. Instructional Programs and Services are those services directly involved with the instructional program of the district. In general, these are activities under the direction and supervision of the deputy superintendent and his cabinet. Curriculum development is included in this category. Supporting Services are the various budgeting activities that deal with the housing, transportation, food services, community services, and improvements which support the instructional program. Fixed charges are also included in this classification.[1] The subcategories are presented in summary form by program for a broad general review.

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[1]Sacramento City Unified School District, Tentative General Fund Budget 1966-1967 (Sacramento, California, June 12, 1966), p. 5.

The expenditures are then further organized in detail by program sub-activities or budget analysis. A detailed outline is prepared of the activities, objectives, goals, and purposes, in addition to broad expectations of performance within the limits of the program. The outline incorporates reviews of tentative additions to or deletions from the program. The appendix section outlines policy or practice and comments on deviations from policy. Federal projects are reviewed separately under the heading Special Projects.

Anchorage, Alaska and Houston, Texas

Anchorage and Houston are reported in the 1966 Muncipal Finance Officers' Association Report, Performance and Program Budgeting Practices in the United States and Canada, as being school districts incorporating complete program budgeting.[1]

The Chicago City School System

Chicago now has the basis and know-how to handle massive amounts of detailed budget input. The city at present is studying program budget alternatives. Current practice incorporates reporting expenditures and appropriations by organizational units and programs. Sixty thousand separate accounts are involved in the product mix.[2]

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[1]Terhune, 12.

[2]Donald W. Hill, "Progress Report on Program Budgeting in Chicago," Trends in Financing Public Education, April, 1965, 191-94.

Denver Public Schools

This system's board and administration exercise a close relationship with local advisory committees. In 1966, reports from 91 committees were reproduced in summary form with recommendations for the use of the board and administrative staff which lead to the adoption of the final budget. Denver does not have a formalized performance budgeting procedure. The system, which is basically cost-center oriented, operates through the close cooperation of the administrators responsible for the various programs or centers.[1]

Detroit City Schools

The Detroit Board of Education receives a monthly two-part data processing report of its operations, one of the entire educational operation and another on the status of the individual divisions. A seven-digit coding system is used to categorize program allocations into ten major functions: instruction, administration, attendance, health services, pupil transportation, operation of plant, maintenance of plant, fixed charges, community services, and food services. Subfunctions are used in addition to provide further detailed information.

An accrual accounting system is used in the Annual Financial Report, which gives comparative summaries of expenditures and revenues spanning the last five years

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[1]Letter from Gerald C. Hicken, "1967 Budget," Denver, Colorado, March 29, 1967.

of operation. Per capita cost schedules dating back to 1939 are given for elementary, junior high school, and high school. Annual cost of instruction also is given by attendance hour.

Expenditures for recent federal programs, such as the Economic Opportunity Act and the Elementary and Secondary Act, are given in a total figure. The Manpower Development and Training Act, in operation since 1962, is reported separately.

No attempt is made in the Annual Financial Report to describe the program or program accomplishment.[1]

Fresno Unified School District

The Fresno Program Budget System, handled by a 360/30 IBM computer, provides separate reports useful for decision-making and budget control. The functional classification of accounts is 95 percent chargeable to grade levels K-6, 7-9, and 10-12, which have program budgets for each of their special areas, such as Mentally Retarded, Home Instruction, etc., and various divisions and departments. This distribution leaves approximately five percent in indirect charges, which are pro-rated basically on an ADA basis. The state of California code of accounts is used for each

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[1]Detroit Board of Education, Annual Financial Report, Vol. 7-1 ADM (Detroit, Mich.: Detroit City Schools, June 30, 1966).

of the programs, which are separated and identified by a three-digit prefix number.[1]

Los Angeles City School District

The Los Angeles system currently is reviewing bids for a third-generation computer. This district is in the early design stages of a program budgeting simulation system. As a pilot project, the Los Angeles system intends to simulate a hypothetical district and to do cost experimentation. Later, read data will be run through the system for cost benefit information.

New York City Schools

New York has let bids for three contracts to private industry to study the feasibility of integrating the school system's programs budget with the City of New York.

States

California

Eighteen diversified, sample program budgets were developed in 1965 under the direction of the state finance officer. The varied programs typically incorporate in their format Program Purposes, Objectives,

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[1]Fresno City Unified School District, Classification of Accounts (Fresno, Cal.: Fresno City Unified School District, July 1, 1965), pp. 1-32.

Functions, and Organization; General Program Information; Program and Budget Changes; Program Summaries; and Costs for the prior Year, Estimated Present, and Proposed for the Next Year.[1]

Connecticut

Connecticut started a program type budget early in the 1950's. Prior to that time, no complete and budgeted documents had been presented to the people. The program budget approach showed appropriation in terms of services to be rendered. Education, one of many programs, covers such areas as teachers' colleges, vocational education, and state apportionments for pupils, called per pupil grants.[2]

Hawaii

Hawaii is unique in that the entire state is made up of a single school district under the direction of the Department of Education. The state uses the program budgeting approach in departments other than education. In education, the budget is broken down into three basic programs: Administrative, Instructional, and Auxiliary and Supportive, which

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[1]California, Sample Program Budgets for Fiscal Year, July 1, 1965-June 30, 1966 (Sacramento, February 16, 1965).

[2]Connecticut, Bureau of the Budget, State of Connecticut Budget Document Program Type (Hartford, June, 1957), p. 7.

are further broken down into activities. Decisions are based on a five-year projection stressing ultimate needs.[1]

Wisconsin

Wisconsin converted its budgeting system to a program budget process in 1965.

It is a unified budget that focuses on what is to be accomplished, not what is to be bought, a principle which provides a meaningful framework for the justification evaluation of every budget request.[2]

The new program budget, which operates biennially, shifts the emphasis to the output of government. It outlines the services to be performed for a clientele and describes the total impact of those services as they relate to cost and need.[3]

The state's educational program, one of ten diversified programs, is made up of nine agencies which divide their various responsibilities into sub-programs. The

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[1]Hawaii, State Department of the Budget, A Report of the Program Approach to Budgeting (Honolulu, March, 1961), pp. 1-64.

[2]Wayne F. McGown, Manual on Budget Preparation, 1966-69 Biennium (Madison: Wisconsin Department of Administration, Bureau of Management, May, 1966), p. 3.

[3]Wisconsin, Department of Administration, Bureau of Management, Public Education Budget (Madison, 1967-69), p. 1.

Wisconsin approach is basically a summarization of line item budgets with an accompanying statement of purpose.

The program is administered by department heads, who are aided by budget analysts assigned to the agency. Both are guided by a detailed budget manual which lists complete instructions and the steps to follow and is geared to an established budget calendar.[1]

The program budgeting approach is designed for implementation in three phases:

1. Make the broad conversion to program budgeting.
2. Institute performance measurements and develop standards for accomplishment.
3. Institute long-range fiscal planning.

The state to this date has accomplished the first phase, which is operationally based on three concepts:[2]

1. Each department will continually analyze its objectives and its programs' methods for meeting these objectives.

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[1]McGown, p. 4.

[2]Paul L. Brown "Wisconsin's Conversion to Program Budgeting," Paper presented at the American Association of State Highway Officials (Wichita, Kansas, December 1, 1966).

2. A long-range program-planning process will exist which incorporates and uses data in meaningful categories for decision-making by the department head, the governor, and the legislature.

3. The budgetary process will refine broad program decisions into a budget context and will present both an appropriate program and financial data for action by the governor and the legislature.[1]

Of key importance in the Wisconsin approach was the development of a uniform accounting-code structure for expenditures, which enables the budget division, through the use of computers, to sort any material by any category.

The budget format provides prior-year cost comparisons and also gives a comparison of last year's program in relation to the newly proposed program.

PROGRAM BUDGETING IN INDUSTRY

In industry, program budgeting can be described as comprehensive, long-range strategic budget planning tied to departmental plans. The process is contingent upon the systematic application of cost-benefit analysis measuring expenditure choices by return on investments.

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[1]McGown, p. 2.

In this respect, program budgeting practices in all areas are basically the same, since all agencies, districts, or corporations are trying to measure objectively the marginal utility of each dollar of expenditure.[1]

The following three examples provide a perspective of program budgeting practices of industries that produce diversified products:

Aerojet-General Corporation

Aerojet uses a separate, long-range planning division which aggregates all plans into a single publication for review. Top-level management attends planning conferences to examine the plans and to determine the mission and objectives of the corporation. All programs and principal markets are reviewed and considered on a three-year basis. The firm uses program planning data sheets to project research and development needs. A program data sheet is used for each major project. The totality of the forms is then used to forecast business, capital, facilities, research, personnel requirements, and costs.[2]

Continental Oil Company

Continental Oil initiated its first company-wide, long-range planning department in 1953. Planning was based on five-year projection of departmental investment programs, incomes, and operating data. However, an evaluation of

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[1]George A. Steiner, Managerial Long-Range Planning (New York: McGraw-Hill Book Co., 1963).

[2]Ibid., p. 3.

these long-range planning efforts revealed a lack of sufficient overall corporate direction and coordination. In addition, projected programs tended to be extensions of present operations. In 1956, the Coordinating and Planning Department was enlarged and divided into three separate divisions: Economic, New Products, and Progress Reports. The department publishes a long-range report summarizing the major policies and objectives of the company. No specific goals or time periods are attached to these statements of policy. Specific programs are presented for implementation based on the proposed policy. The programs are designed with respect to the activities to be undertaken, manpower, money, and facilities.

Ford Motor Company

The Ford Motor Company has no formal planning office; the central finance staff plays the major role in developing goals. After project strategy meetings, the divisional product planning office prepares a "paper program" for the policy committee. The paper program, based on at least a four-year target date, includes estimates of required expenditures for plant equipment, tooling, design cost specifications, performance of the unit, dimensional characteristics, and marketing variables.

Once a program is approved, it becomes the responsibility of the affected division to prepare recurring status reports comparing the outlook with the objectives contained in the program.[1]

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[1] Ibid., p. 241.

SUMMARY

Budget history reveals that program budgeting has progressed considerably in development and use, but only recently has it been used by the public schools.

Program budgeting is practiced differently, depending on the mission of an organization or school district. With regard to schools, literature on the subject is mainly limited to the actual working budget and its reporting documents, which provide the most current information. However, writings by program budgeting authorities in other fields have general application for schools.

In industry, program budgeting is fundamentally comprehensive long-range planning which is related to departmental plans. Cost-benefit analysis is used to analyze the investment returns on expenditure choices.

Program budgeting for schools, when applied to traditional budgeting, focuses on end-product activities based on expenditure choices. This method involves long-range planning rather than the examination of minute object-of-expenditure details.

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